UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901
DEC 03 2019

Ms. Sylvia Vanderspek, Chief
Air Quality Planning Branch
Air Quality Planning and Science Division
California Air Resources Board
P.O. Box 2815
Sacramento, California 95812

Dear Ms. Vanderspek:

EPA concurs with the State's request to exclude data showing exceedances of the 1987 24-hour PM_{10} National Ambient Air Quality Standards (NAAQS) on January 31, 2014, at one monitor in the Imperial County, CA nonattainment area pursuant to the Exceptional Events Rule (EER).

The submittal from California Air Resources Board (CARB) and Imperial County Air Pollution Control District (ICAPCD),[1] dated August 29, 2017, included documentation that the January 31, 2014 exceedance was caused by an exceptional event due to a high wind dust event. After thoroughly reviewing the information you provided, we agree that the State's submittals meet the demonstration criteria and the schedule and procedural requirements in the EER. The basis for our concurrence is set forth in the enclosed technical support document. My staff will enter concurrence flags for these data into the U.S. Environmental Protection Agency's (EPA's) Air Quality System database.

EPA's concurrence is a preliminary step in the regulatory process for actions that may rely on these data and does not constitute final Agency action. If EPA completes a notice-and-comment rulemaking for an action that is influenced by the exclusion of the PM_{10} data specified in this concurrence, EPA's concurrence letter and accompanying technical support document would be included in the record as part of the technical basis for the proposed action. If we receive comments, we must consider and respond to those comments before taking final regulatory action. When EPA issues that regulatory action, it is a final Agency action subject to judicial review.

[1] While submitted by CARB, the demonstration and addendums were developed through a joint effort by CARB and ICAPCD.

We appreciate the solid technical analysis and collaborative approach used to develop these submittals. If you have any questions or wish to discuss this matter further, please contact me at (415) 972-3183, or Meredith Kurpius at (415) 947-4534.

Sincerely,

Elizabeth J. Adams

Elizabeth J. Adams
Director, Air and Radiation Division

Enclosure

cc (via email): Webster Tasat, CARB
Theresa Najita, CARB
Reyes Romero, ICAPCD
Monica Soucier, ICAPCD

ENCLOSURE: TECHNICAL SUPPORT DOCUMENT FOR THE EPA'S CONCURRENCE ON PM_{10} EXCEEDANCES MEASURED IN IMPERIAL COUNTY ON JANUARY 31, 2014, AS AN EXCEPTIONAL EVENT

EXCEPTIONAL EVENTS RULE REQUIREMENTS

Pursuant to the 2005 amendment of Clean Air Action (CAA) Section 319, the EPA promulgated revisions to the Exceptional Events Rule (EER) in October 2016. 81 FR 68216 (October 3, 2016).[1] The 2016 EER revised definitions, criteria for the EPA's approval, procedural requirements, and requirements for air agency demonstrations set forth at 40 CFR §50.1(j)-(r); §50.14; and §51.930 of the Code of Federal Regulations (CFR). The EPA reviews the information and analyses in the air agency's demonstration package using a weight of evidence approach and decides to concur or not concur. The air agency's demonstration must satisfy all of the EER criteria for the EPA to concur with excluding the air quality data from regulatory determinations.

Under 40 CFR §50.14(c)(3)(iv)(A)-(E), the air agency demonstration to justify data exclusion must include:

- A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s);
- A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation;"
- Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times" to support requirement (B) above;
- A demonstration that the event was both not reasonably controllable and not reasonably preventable; and
- A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event.[2]

[1] The 2016 EER supersedes the 2007 EER, and natural and exceptional events data handling guidance developed prior to the 2007 EER, as well as the 2013 Interim Exceptional Events Implementation Guidance. 81 FR 68220.

[2] A natural event is defined at 40 CFR §50.1(k) as "an event and its resulting emissions, which may recur at the same location, in which human activity plays little or no direct causal role. For purposes of the definition of a natural event, anthropogenic sources that are reasonably controlled shall be considered to not play a direct role in causing emissions."

In addition, the air agency must meet several procedural requirements, including:

1. Submission of an Initial Notification of Potential Exceptional Event and flagging of the affected data in the EPA's Air Quality System (AQS) as described in 40 CFR §50.14(c)(2)(i);

2. Completion and documentation of the public comment process described in 40 CFR §50.14(c)(3)(v)(A)-(C); and

3. Implementation of any applicable mitigation requirements as described in 40 CFR §51.930.[3]

Because event-related anthropogenic emissions can contribute to an exceedance attributable to high winds, high wind dust events are a unique type of natural event. For this reason, demonstrations for high wind dust events must first establish that the event was not reasonably controllable or preventable in order to demonstrate that the event is a natural event or that there is a clear causal relationship between the event and an exceedance. Therefore, this Technical Support Document (TSD) presents the requirements of 40 CFR §50.14(c)(3)(iv)(A)-(E) in a slightly different sequence than as codified in the CFR.

Narrative Conceptual Model

The EPA expects that a narrative conceptual model of the event will describe and summarize the event and provide context for analyzing the required statutory and regulatory technical criteria. Air agencies may support the narrative conceptual model with summary tables or maps. For particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM_{10}) high wind dust events, the EPA recommends that the narrative conceptual model identify the event as a natural event and provide a general description of the affected area. It should also discuss the interaction of wind speed, potential source areas, and PM_{10} concentrations across the area during the event and, under 40 CFR §50.14(a)(1)(i), the regulatory significance of the requested data exclusion.

Not Reasonably Controllable or Preventable (nRCP)

40 CFR §50.14 (b)(8)(i) requires that air agencies establish that the event be both not reasonably controllable *and* not reasonably preventable. For high wind dust events, the EPA separately evaluates prevention and control. Provided the demonstration establishes that a high wind dust event occurred, a case-by-case justification that the event was not reasonably *preventable* is not required.[4] The EPA considers an event not reasonably *controllable* if "reasonable measures to control the impact of the event on air quality were applied at the time of the event" and will "assess the reasonableness of available controls for anthropogenic sources based on information as of the date of the event."[5]

[3] This requirement only applies for those areas identified in accordance with the provisions of 40 CFR §51.930.
[4] 40 CFR §50.14 (b)(5)(iv).
[5] 40 CFR §50.14 (b)(8)(iii)-(iv).

The EPA evaluates whether a high wind dust event was not reasonably controllable by considering the wind speed associated with the event with respect to the EPA's 25 miles per hour (mph) high wind threshold (or Administrator-approved alternate threshold),[6] and an assessment of reasonable controls on contributing anthropogenic sources in place at the time of the event. Generally, "controls on an anthropogenic source shall be considered reasonable in any case in which the controls render the anthropogenic source as resistant to high winds as natural undisturbed lands in the area."[7]

Except where a State is obligated to revise a state implementation plan, the EPA will also consider "all enforceable control measures implemented in accordance with a state implementation plan…approved by the EPA within 5 years of the date of the event, that address the event-related pollutant and all sources necessary to fulfill the requirements of the [CAA] for the state implementation plan…to be reasonable controls."[8] The EPA also will not "require a State to provide a case-specific justification to support the not reasonably…controllable criterion for emissions-generating activity that occurs outside the State's jurisdictional boundaries."[9] Also, the EPA will generally consider documentation for large-scale, high-energy high wind dust events to be sufficient with respect to the not reasonably controllable criterion provided the evidence showing the nature and extent of the event, that the event was associated with a dust storm and is the focus of a dust storm warning, has sustained winds that are greater than or equal to 40 mph, and has reduced visibility equal to or less than 0.5 miles.[10]

In general, for the not reasonably controllable criterion, demonstrations must include:

- Identification of the natural and anthropogenic sources of emissions causing and contributing to the monitored exceedance or violation, including contribution from local sources. 40 CFR §50.14 (b)(8)(viii)(A);

- Identification of the relevant state implementation plan, tribal implementation plan, federal implementation plan, or other enforceable control measures in place for the sources identified and the implementation status of those controls. 40 CFR §50.14 (b)(8)(viii)(B); and

- Evidence of effective implementation and enforcement of the measures identified. 40 CFR §50.14 (b)(8)(viii)(C).[11]

[6] 40 CFR §50.14 (b)(5)(iii): "The Administrator will accept a high wind threshold of a sustained wind of 25 mph…States can identify and use an Administrator-approved alternate area-specific high wind threshold that is more representative of local or regional conditions, if appropriate."
[7] 40 CFR §50.14 (b)(5)(v).
[8] 40 CFR §50.14 (b)(8)(v)-(vi).
[9] 40 CFR §50.14 (b)(8)(vii).
[10] 40 CFR §50.14 (b)(5)(vi).
[11] These requirements do not apply if the event meets the criteria applicable to wildfires, large-scale and high-energy high wind dust events, and stratospheric intrusions.

Clear Causal Relationship (CCR) and Supporting Analyses

The EPA considers a variety of evidence when evaluating whether there is a clear causal relationship between the specific event and the monitored exceedance or violation. For PM_{10} high wind dust events, air agencies should compare the PM_{10} data requested for exclusion with historical concentrations at the monitor to support the showing of a clear causal relationship between the event and the monitored data. In addition to providing this information on the historical context for the event-influenced data, air agencies should further support the clear causal relationship criterion by providing evidence that the high wind dust event's emissions from natural or reasonably controlled anthropogenic sources were transported to the monitor. In some cases, air agencies may also need to provide quantitative evidence of the contribution of the high wind dust event's emissions to the monitored PM_{10} exceedance or violation.

Natural Event or Event Caused by Human Activity That is Unlikely to Recur

According to the CAA and the EER, an exceptional event must be "an event caused by human activity that is unlikely to recur at a particular location *or* a natural event."[12] The 2016 EER defines a high wind dust event as "an event that includes the high-speed wind and the dust that the wind entrains and transports to a monitoring site,"[13] and states that the EPA "will consider high wind dust events to be natural events in cases where windblown dust is entirely from natural undisturbed lands in the area or where all anthropogenic sources are reasonably controlled."[14] Once an agency provides evidence that a high wind dust event occurred and demonstrates that the event was not reasonably controllable and there is a clear causal relationship between the measurement under consideration and the event, the EPA expects minimal documentation, such as a statement that criteria have been met, to satisfy the "natural event" element.

[12] 42 U.S.C. 7619(b)(1)(A)(iii) and 40 CFR §50.1(j) (emphasis added).
[13] 40 CFR §50.1(p).
[14] 40 CFR §50.14(b)(5)(ii).

OVERVIEW OF EVENT

On April 24, 2017, the California Air Resources Board (CARB) submitted an Initial Notification of Potential Exceptional Event (Initial Notification) prepared by Imperial County Air Pollution Control District (ICAPCD) for numerous exceedances of the 24-hour PM_{10} National Ambient Air Quality Standard (NAAQS) that occurred at monitoring stations within Imperial County, CA in 2014, 2015, and 2016.[15] Upon review of this submittal, the EPA determined that data exclusion of some of the exceedances could have regulatory significance for a maintenance plan and redesignation request for the 24-hour PM_{10} NAAQS and worked with ICAPCD and CARB to identify the relevant exceedances.

The April 24, 2017 Initial Notification included an exceedance of the 24-hour PM_{10} NAAQS that occurred at a monitoring station within Imperial County, CA on January 31, 2014. On August 29, 2017, CARB submitted an exceptional events demonstration prepared by ICAPCD for the January 31, 2014 exceedance, "January 31, 2014 Exceptional Event Documentation for the Imperial County PM_{10} Nonattainment Area" (Demonstration), that included the Final Demonstration, Appendices A-D, and an addendum (Addendum).[16] Table 1 summarizes these exceedances.

In the demonstration, ICAPCD stated and provided evidence that the PM_{10} exceedance measured on this day was caused by emissions from a high wind dust event.

Table 1: EPA 24-hour PM_{10} Exceedance Summary

Exceedance Date	Site Name	AQS ID	24-hour Average ($\mu g/m^3$)
January 31, 2014	Brawley	06-025-0007-3	198[a]

[a] This value differs slightly (i.e., 1-2 $\mu g/m^3$ difference) than the value in the State's exceptional events demonstration. The 24-hour average PM_{10} concentration value in this TSD is the certified value for the 24-hour average PM_{10} concentration in the EPA's AQS database. This minor variation between the EPA's AQS database and the State's demonstration does not affect the EPA's finding, explained elsewhere in this document, that the State has demonstrated that this exceedance was caused by an exceptional event.

[15] Email from Theresa Najita, California Air Resources Board, to Michael A. Flagg and Jennifer Williams, EPA Region IX, "Revised Exceptional Event Initial Notification Information Form Submittal – Imperial County 2014-2016," dated April 24, 2017.
[16] Letter from Sylvia Vanderspek, California Air Resources Board, to Meredith Kurpius, EPA Region IX, dated August 29, 2017, with enclosure.

A. Event Day: January 31, 2014

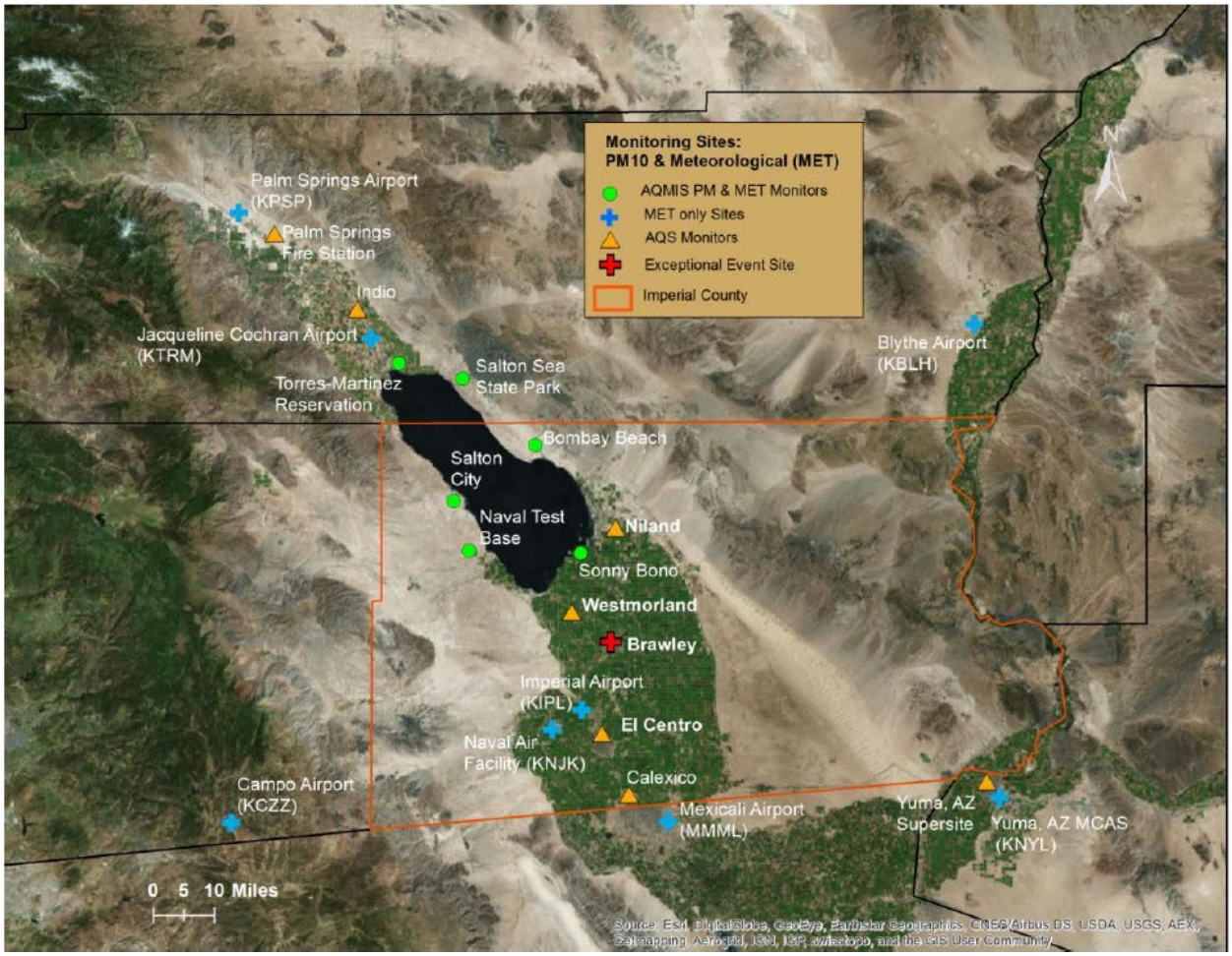
Table A.1: EPA 24-hour PM_{10} Exceedance Summary

Exceedance Date	Site Name	AQS ID	24-hour Average (µg/m³)
January 31, 2014	Brawley	06-025-0007-3	198

1. Narrative Conceptual Model

Sections I and II of the Demonstration provided a narrative conceptual model of the event and included characteristics of Imperial County, such as general description of the geography, topography, and meteorology, and a description and map of the ambient air quality monitoring network and meteorological sites (see Figure A.1).

Figure A.1: Monitoring Sites in Imperial County[17]



[17] Demonstration, p. 9.

Sections I and II further described the event-specific characteristics and included ICAPCD's claims that the exceedance measured at the Brawley monitoring site (Brawley) was caused by "the entrainment of fugitive windblown dust from high winds generated by a low pressure system moving across southeastern California,"[18] and that the exceedance qualifies as an exceptional event under the EER. ICAPCD summarized the event and included a table of 24-hour PM_{10} concentrations, maximum hourly PM_{10} concentrations and maximum wind gusts in Imperial, Riverside, and Yuma counties, National Oceanic and Atmospheric Administration (NOAA) surface analysis maps, Geostationary Operational Environmental Satellite – West (GOES-W) infrared satellite composite image, a "time sequence" analysis which included descriptions of wind speeds in upwind areas and the start times for elevated hourly PM_{10} concentrations, a table of peak wind speeds, wind direction, and peak hourly PM_{10} concentrations, NOAA Hybrid Single Particle Lagrangian Integrated Trajectory Model (HYSPLIT) back trajectories from locations exceeding the PM_{10} NAAQS, and 72-hour time-series of PM_{10} concentration profiles for monitoring sites in the area.

Based on the information described above, ICAPCD's demonstration satisfies the narrative conceptual model criterion of the EER.

Table A.2: Documentation of Narrative Conceptual Model

Exceedance Date	**Demonstration Citation**	**Quality of Evidence**	**Criterion Met?**
January 31, 2014	Section I and II, p. 1-18 Addendum, p. A-8	Sufficient	Yes

2. Not Reasonably Controllable or Preventable (nRCP)

High wind threshold

ICAPCD provided documentation showing that sustained wind speeds associated with the event were above the EPA's 25 mph high wind threshold on January 31, 2014. For example, maximum sustained wind speeds of 27 mph were measured at the Niland monitoring site, with gusts of 29 mph measured at the El Centro NAF National Weather Service (NWS) station on January 31, 2014.[19]

Identification of contributing sources

ICAPCD analysis shows satellite imagery and HYSPLIT back trajectories originating from the Brawley monitoring site and forward trajectories from the western edge of the Sonoran Desert in Imperial County.[20] ICAPCD states that the analysis "identifies the Sonoran Desert to the west of the Brawley monitor as the primary source of dust emissions,"[21] and that "[t]he source area for the particulate matter was the western edge of the Sonoran Desert near the Imperial County line and eastward into San Diego County."[22]

[18] Demonstration, p. 1.
[19] Demonstration, p.16; see also p. 27.
[20] Demonstration, p. 17, p. 29-30.
[21] Addendum to Demonstration, p. A-5.
[22] Demonstration p. 29.

Identification of reasonable controls

In Section IV, ICAPCD provided detailed information on the current set of required controls in the Imperial County PM_{10} nonattainment area, including information on nonattainment status and a description and timeline of implementation of Regulation VIII, which includes Rules 800, 801, 802, 803, 804, 805, and 806. Regulation VIII was adopted by ICAPCD on October 16, 2012, and Rules 800, 804, 805, and 806 were approved by the EPA as Best Available Control Measure (BACM) level rules on April 22, 2013, with an effective date of May 22, 2013. Regulation VIII "addresses the desert open areas managed by BLM, California Department of Parks, construction, open areas, track out, paved and unpaved roads, and agricultural operations."[23] ICAPCD also notes that "both permitted and non-permitted sources are required to comply with Regulation VIII requirements that address fugitive dust emissions."[24] ICAPCD also included the detailed Regulation VIII text in Appendix D of the Demonstration, which further describes each of the rules identified in Section IV.

As identified above, ICAPCD states that the potential source area includes locations "eastward into San Diego County." This statement is supported by the HYSPLIT back trajectory analysis, which shows the trajectory passing through the eastern portion of San Diego County.[25] Based on a review of satellite imagery, this area appears to be predominately natural desert that transitions to mountainous terrain over 3,000 ft in elevation. San Diego County is currently a PM_{10} attainment area with no federally required PM_{10} SIP control measures. San Diego County does have local control measures that reduce PM (including PM_{10}) from sources such as: Rule 50 Visible Emissions, Rule 51 Nuisance, Rule 52 Particulate Matter, Rule 54 Dust and Fumes, Rule 55 Fugitive Dust Control, and Rule 101 Burning Control.

Evidence of effective implementation and enforcement

ICAPCD states that it evaluated inspection reports, air quality complaints, compliance reports, and other documentation and did not find evidence of unusual anthropogenic PM_{10} emissions. ICAPCD also states that it received one complaint on January 31, 2014, regarding the burning of residential waste: "The follow up investigation by certified personnel concluded that illegal burning took place. Although a notice of exceedance was issued, the actual burn had no impact on the Brawley monitor. The lot is upwind of the Brawley area and the wind direction was westerly therefore it had no impact to the January 31, 2014 exceedance."[26]

Not reasonably preventable

While high wind dust events do not require a case-specific justification that the event was also not reasonably preventable,[27] ICAPCD discusses this criterion and states that "[t]he January 31, 2014 EE demonstration provides evidence that a 'high wind event' occurred" and, therefore, a specific showing of the not reasonably preventable criterion is not required.[28]

[23] Addendum to Demonstration, p. A-5.
[24] Addendum to Demonstration, p. A-5.
[25] Demonstration, p. 17.
[26] Demonstration, p. 36-37.
[27] 40 CFR §50.14 (b)(5)(iv).
[28] Addendum to Demonstration, p. A-8.

EPA conclusion regarding nRCP criterion

Generally, State Implementation Plan (SIP) rules must be enforceable and must not relax existing requirements (see CAA sections 110(l) and 193). Rules implementing BACM and Best Available Control Technologies (BACT) are required in serious PM_{10} nonattainment areas (see CAA sections 189(a)(1) and 189(b)(1)). The ICAPCD regulates a PM_{10} nonattainment area classified as serious (see 40 CFR part 81), so the applicable SIP should contain rules that implement BACM on contributing anthropogenic sources of windblown dust.

On July 8, 2010,[29] the EPA approved versions of the rules that comprise Regulation VIII, but required revisions to Rules 800, 804, 805, and 806. On April 22, 2013,[30] the EPA fully approved these rule revisions into the California SIP. The final rule also stated that the "EPA's preliminary view is that the Regulation VIII rules as revised in October 2012 constitute reasonable control of the sources covered by Regulation VIII for the purpose of evaluating whether an exceedance of the PM_{10} NAAQS is an exceptional event pursuant to the exceptional events rule, including reasonable and appropriate control measures on significant contributing anthropogenic sources."[31]

Since the Regulation VIII rules were approved into the California SIP within five years of the date of the event, the EPA considers these enforceable control measures to be reasonable controls under 40 CFR §50.14(b)(8)(v). The EPA also considers the control measures in place in San Diego County to be reasonable controls for this event based on San Diego's PM_{10} attainment status and the back-trajectory analysis showing the trajectory passing through the eastern portion of San Diego County that appears to be predominately natural desert and mountainous areas with few sources of anthropogenic windblown dust. Therefore, the EPA is satisfied that ICAPCD demonstrated the nRCP criterion of the EER.

Table A.3: Documentation of nRCP

Exceedance Date	**Demonstration Citation**	**Quality of Evidence**	**Criterion Met?**
January 31, 2014	Section II, p. 16 Section IV p.23-27 Addendum, p. A-5 – A-9 Appendix D	Sufficient	Yes

3. Clear Causal Relationship (CCR)

Comparison with historical concentrations

In Section III, ICAPCD included a comparison with historical concentrations, as required by 40 CFR §50.14(c)(3)(iv)(C). ICAPCD compared the event-related PM_{10} concentrations with concentrations from 2010-2014 by highlighting the event day compared to routine data throughout the year and the season in which the exceedance occurred (January – March). The

[29] 75 FR 39366
[30] 78 FR 23677
[31] 78 FR 23682

analysis also showed that the 24-hour PM_{10} concentration on the exceedance day was above the 99th percentile value for 2010-2014 time period.

Evidence of transport of high wind dust emissions from the source area to the monitor

In addition to analyses presented in Sections I and II, Section V of the Demonstration included a "event day entrainment" analysis of the event data that showed satellite imagery and locations of the source area, a 21:00 hour HYSPLIT forward trajectory analysis, general wind direction in the upwind and downwind areas, and select PM_{10} monitored concentrations and wind speed values at locations throughout Imperial County.

ICAPCD also included a 72-hour time-series graphs of wind speed and wind gust measurements at selected locations, and hourly PM_{10} concentrations at Brawley monitoring site and wind speed and wind gusts from Imperial County NWS stations and other meteorological sites. In addition, a 72-hour time-series graph of PM_{10} concentrations and wind speed and wind gust measurements at selected locations, and a time-series graph of PM_{10} concentrations in Riverside, Imperial, and Yuma counties and visibility from the Imperial County Airport and El Centro NAF NWS stations are included.

Appendix A of the demonstration included NWS weather messages. Consistent with the discussion in Sections I, II, and V of the demonstration, NWS Phoenix, AZ issued a forecast for Imperial County at 02:10 hours on January 31, 2014, stating that "Today…west wind 15 to 25 mph. Tonight…west wind 10 to 20 mph. Gusts up to 30 mph in the evening." NWS San Diego, CA also issued a high wind warning at 21:50 hours on January 30, 2014, "through 1 pm PST Friday" (January 31, 2014), for the Coachella Valley (eastern Riverside County), Riverside County mountains, San Bernardino County mountains, and San Diego County deserts and mountains occurring in the forecast area. The National Oceanic and Atmospheric Administration (NOAA) high wind storm report for Coachella Valley states, "A trough of low pressure moving across central California brought strong west winds to the mountains and deserts from the evening of the 30th through the morning of the 31st. Sustained winds of 25 to 35 mph and gusts to 60 mph…locally higher were observed."

Appendix B of the demonstration included time-series of wind speed, wind gusts, and wind direction for numerous meteorological sites throughout the area, and Quality Controlled Local Climatological Data for NWS airport sites in Imperial County. These data show weather types of haze (HZ) observed at 1953 hours at the Imperial County Airport NWS station on January 30, 2014.

Appendix C of the demonstration included individual time-series graphs of hourly PM_{10} concentrations, wind speed, and wind gusts at Brawley, Niland, Indio, Palm Springs, Torres-Martinez, and Yuma monitoring sites.

ICAPCD concluded that "[m]eteorological observations identified a low pressure system and accompanying trough and cold front, as responsible for lofting and transporting dust that resulted in an exceedance recorded by the Brawley FEM monitor on January 31, 2014. Strong, gusty westerly winds associated with the weather system swept across the mountains and deserts of

southeastern California. These winds were directly responsible for the high PM_{10} concentrations observed in Imperial County on January 31, 2014," and that "[t]he source area for the particulate matter was the western edge of the Sonoran Desert near the Imperial County line and eastward into San Diego County."[32]

EPA conclusion regarding CCR criterion

The analyses included in the demonstration, specifically, the evaluation of five years of PM_{10} monitoring data, numerous time-series graphs and tables of wind speed, wind gusts, wind direction, and hourly PM_{10} concentrations throughout Imperial County, the "event day entrainment" analysis, NOAA HYSPLIT back and forward trajectory analysis, "time sequence" analysis showing upwind wind speed and direction measurements, NWS station reports of reduced visibility and haze, and the issuance of a NWS high wind warning sufficiently demonstrate that high wind speeds in upwind areas caused emissions from natural desert areas and reasonably controlled local anthropogenic sources to the west of Brawley, which were transported to Brawley and caused an exceedance of the 24-hour PM_{10} NAAQS. Therefore, the demonstration shows a clear causal relationship between the high wind dust event emissions and the exceedances measured at Brawley.

Table A.4: Documentation of CCR

Exceedance Date	Demonstration Citation	Quality of Evidence	Criterion Met?
January 31, 2014	Sections I, II, and V Appendices A, B, and C	Sufficient	Yes

4. Natural Event

ICAPCD states that "the PM_{10} exceedance which occurred in Brawley on January 31, 2014, was caused by transport of fugitive dust into Imperial County by strong predominantly westerly winds associated with a large low pressure system. The event therefore qualifies as a natural event"[33] and provided evidence that the emissions originated from desert areas located to the west of Brawley in Imperial and San Diego counties and that reasonable controls on contributing anthropogenic sources were in place at the time of the event.

Natural Event conclusion

ICAPCD's CCR and nRCP analyses demonstrate that event-related emissions of windblown dust were from natural undisturbed lands and that upwind anthropogenic sources were subject to EPA-approved BACM level controls at the time of the event. Therefore, the EPA is satisfied that ICAPCD has demonstrated that the high wind dust event met the definition of a natural event.

Table A.5: Documentation of Natural Event

Exceedance Date	Demonstration Citation	Quality of Evidence	Criterion Met?
January 31, 2014	Section I, II, and V	Sufficient	Yes

[32] Demonstration p. 28-29.
[33] Demonstration p. 40.

5. Schedule and Procedural Requirements

In addition to technical demonstration requirements, 40 CFR §50.14(c) and 40 CFR §51.930 specify schedule and procedural requirements an air agency must follow to request data exclusion. Table A.6 outlines the EPA's evaluation of these requirements.

Table A.6: Schedules and Procedural Criteria

Criterion	Reference	Demonstration Citation	Criterion Met?
Did the agency provide prompt public notification of the event?	40 CFR §50.14 (c)(1)(i)	Sufficient	Yes
Did the agency submit an Initial Notification of Potential Exceptional Event and flag the affected data in the EPA's Air Quality System (AQS)?	40 CFR §50.14 (c)(2)(i)	Sufficient	Yes
If applicable, did the initial notification and demonstration submittals meet the deadlines for data influenced by exceptional events for use in initial area designations? Or the deadlines established by the EPA during the Initial Notification of Potential Exceptional Events process, if applicable?	40 CFR §50.14 Table 2 40 CFR §50.14 (c)(2)(i)(B)	Sufficient	Yes
Was the public comment process followed and documented? • Did the agency document that the comment period was open for a minimum of 30 days? • Did the agency submit to the EPA any public comments received? • Did the state address comments disputing or contradicting factual evidence provided in the demonstration?	40 CFR §50.14 (c)(3)(v)	Sufficient	Yes
Has the agency met requirements regarding submission of a mitigation plan, if applicable?	40 CFR §51.930 (b)	NA	NA

6. Conclusion

The EPA has reviewed the documentation provided by CARB and ICAPCD to support claims that a high wind dust event caused an exceedance of the 24-hour PM_{10} NAAQS at Brawley on January 31, 2014. The EPA has determined that the flagged exceedance at this monitoring site on this day meets the definition of an exceptional event: the high wind dust event affected air quality in such a way that there exists a clear causal relationship between the event and the monitored exceedance, was not reasonably preventable or controllable, and meets the definition of a natural event. The EPA has also determined that the CARB and ICAPCD have satisfied the schedule and procedural requirements for data exclusion.